

REMARKS

The above amendment and these remarks are responsive to the Office Communication of Examiner Victor D. Lesniewski, mailed 25 Nov 2005, and designated as Final.

Claims 1-5, 8-14, 18-25, 29-30, 34-41, 43, and 45 -53 are in the case, none as yet allowed.

35 U.S.C. 103

Claims 1-5, 8-14, 22, 24, 25, 29, 30, 34-37, 39, 41, 43, 45, 47-50, 52, and 53 have been rejected under 35 U.S.C. 103(a) over Lucovsky (U.S. Patent 6,868,450) in view of Jackowski et al. (U.S. Patent 6,141,686, hereinafter Jackowski).

Applicants traverse, and argue that the Examiner has

not established a prima facie case of obviousness, which requires that the Examiner provide:

1. one or more references
2. that were available to the inventor and
3. that teach
4. a suggestion to combine or modify the references,
5. the combination or modification of which would appear to be sufficient to have made the claimed invention obvious to one of ordinary skill in the art.

The fourth element of the prima facie case, the suggestion to combine, must come from the prior art. It is insufficient to establish obviousness that the separate elements of the invention existed in the prior art, absent some teaching or suggestion, in the prior art, to combine the elements. [See Arkie Lures, Inc. v. Gene Larew Tackle, Inc., 43 USPQ 2d 1294 (Fed. Cir. 1997)].

That a claimed invention may employ known principles does not itself establish that the invention would have been obvious, particularly where those principles are employed to deal with different problems. The Examiner must consider

the claim as a whole, and not piece together the claimed invention using the claims as a guide. The Federal Circuit has stated: "[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. [See *In re Fritch*, 23 USPQ 2d 1780, 1784 (Fed. Cir. 1992)].

Applicants argue that the combinations presented under 35 U.S.C. 103 by the Examiner with respect to the claims in the case (rejections under both paragraphs 10 and 16) represent hindsight reconstruction of known principles dealing with different problems, pieced together using applicant's claims as a guide.

In the present invention, IP packet filtering occurs in an operating system kernel implementation of, for example, the TCP/IP protocol suite. Access rules are expressed as filters referencing system kernel data; for outbound processing, source application indicia is determined; for inbound packet processing, a look-ahead function is executed to determine target application indicia; and responsive to the source or target application indicia, filter processing is executed.

In their previous amendment, applicants provide a detailed description of the Lucovsky reference and its distinctions with respect to the claims of the current application.

With respect to claims 1, 10, 22, 25, 30, 34, 36, 37, 39, 41, 43, 45, 48, 49, and 53, in the present Office Action, paragraph 12, the Examiner states:

"...Lucovsky did not explicitly state..."

and then continues the sentence to quote the 3rd clause of claim 1, as follows:

"...a look-ahead function being executed within a protocol stack including an IP layer, a transport layer, a sockets layer, and an application layer and which, for said inbound packet, said IP layer provides to said transport layer said inbound packet and receives back from said transport layer indicia, provided to said transport layer by said sockets layer, identifying the application layer application to which said packet would have been delivered."

The Examiner continues by referring to Jackowski, as follows:

"However, Jackowski does explicitly disclose this feature as his system uses an extensible service provider within the stack to identify high-level applications." [Emphasis added.]

Apparently the antecedent of "this feature" is the material quoted above from the 3rd clause of claim 1.

Applicants traverse the conclusion of the Examiner represented by the phrase "within the stack" in the above quoted material from paragraph 12. The Examiner is using the term "the stack" differently than in the present application. In applicant's claim, the phrase used is "the protocol stack", clearly referring to the following stack definition:

"...a protocol stack including an IP layer, a transport layer, a sockets layer, and an application layer..."
[Claim 1].

These layers are characteristic of a TCP/IP protocol stack,

and in applicant' invention clearly refer to code that implements a suite of protocols, like those of the TCP/IP protocol, within the protocol stack. Jackowski just as clearly does not do anything "within the stack" in the same sense. See, for example, Jackowski's Figures 4, 5 and 10 wherein Jackowski's "extensible service provider" is quite clearly positioned with respect to the TCP/IP stack and also quite clearly outside of it.

There are implications to implementing a suite of protocols "within" the protocol stack that Jackowski does not address, as is discussed below.

The Examiner then states:

"It would have been obvious... to modify the system of Lucovsky... to which said packet would have been delivered as provided by Jackowski." [Office Action, paragraph 12.]

Applicants traverse. The Jackowski function runs above the protocol (TCP/IP) stack. Thus, the above quoted sentence is not technically accurate.

Applicant's invention does IP packet filtering; that is, permitting and denying packets. It integrates traditional IP packet filtering and IP packet filtering based on non-IP packet attributes. It does not do prioritization, nor frequency counts - to which the Jackowski reference is directed. Basically, Jackowski does not do IP packet filtering, and what Jackowski does do is not done within the protocol stack defined in applicant's claims.

With respect to claims 1, 10, 22, 24, 29, 34, 36, 37, 39, 41, 43, 45, 47, 49, 50, and 52, in paragraph 13 of the Office Action, the Examiner states:

"Again, the combination satisfies the need for a system that prioritizes network traffic based on high-level applications and users rather than..."

Applicants traverse. Jackowski adds nothing to the combination cited with respect to these claims inasmuch as Jackowski does not filter, and what it does do does not run as part of the protocol stack.

With respect to claims 1, 10, 22, 25, 30, 34, 36, 37,

39, 41, 43, 45, 48, 49, and 53, in paragraph 14 of the Office Action, the Examiner states:

"In one instance Lucovsky discusses values that uniquely identify each process. See column 5, lines 18-24."

Lucovsky is right. But the Examiner states:

"Lucovsky does not explicitly state marking a packet as non-deliverable. However, taking some action on a packet before passing it on for further filtering is well known in the art and Lucovsky has disclosed a variety of features that could be used for such an action."

Applicants traverse. The Lucovsky triplet is a well known logical consequence of the TCP/IP stack design and is not "taking some action on a packet before passing it on...", as the Examiner asserts. The Examiner then states:

"For example, a packet could be marked as non-deliverable before being passed to the sockets layer if its data does not correctly identify a ~~certain value of~~

~~a certain process."~~ [Strikethru added.]

That is true, but irrelevant, because that is not what applicants are claiming. The third clause of claim 1, for example, makes it clear that this marking is part of the look-ahead function, and that is not taught by Lucovsky.

Applicants urge, therefore, that 1-5, 8-14, 22, 24, 25, 29, 30, 34-37, 39, 41, 43, 45, 47-50, 52, and 53 be allowed.

Claims 18-21, 23, 38, 40, 46, and 51 have been rejected under 35 U.S.C. 103(a) over Lucovsky in view of Jackowski, as applied above, further in view of Fiveash et al. (U.S. Patent 6,076,168, hereinafter Fiveash).

With respect to claims 18-21, 23, 38, 40, 46, and 51, these claims relate to the advantage of being able to combine traditional IP filtering with non-packet attribute filtering. Unlike Jackowski, there is no separation of 'policy' and filters. Again, Jackowski runs outside of the protocol (TCP/IP) stack.

While Fiveash is related, generally, to filtering, Fiveash does not provide look-ahead processing. Further, filtering is done by Fiveash only with respect to IP packet data, and not non-IP packet data as required by the claims, and thus, in combination with Lucovsky, does not teach the claims as currently presented with limitations relating to filtering of non-IP data and look-ahead processing. Because applicants can filter on non-IP packets, then that filtering can be applied to various kinds of IP tunnels.

The Examiner uses the phrase 'may access a network'. It is clear that applicant's invention works for all inbound and outbound IP traffic on any system on which it is implemented. So applicant's invention is not just about access of a network.

With respect to claims 18, 23, 38, 40, 46, and 51, the Examiner states, at paragraph 19 of the Office Action:

"It would have been obvious to... modify the combination of Lucovsky and Jackowski by adding the ability to provide filter statements syntax as provided by Fiveash."

Applicants traverse. It makes more sense to say 'modify Lucovsky by adding the ability to filter...'. That is, Jackowski is positioned at a completely different place than Lucovsky and Fiveash. Jackowski's solution is above the TCP/IP stack. Hense, it would be unnatural and non-obvious to combine it with either Lucovsky or Fiveash.

Concerning the obviousness of combining Lucovsky and Fiveash, Lucovsky's approach was a way to use 'process attributes' to do some packet traffic control ('pass to the network and 'can pass to the process') precisely without changing or impacting IP filtering. (This was probably motivated by the fact that the Locovsky implementation did not have access to the TCP/IP stack and IP filtering implementations.) That is, Lucovsky avoids IP filtering, and hence has to build mechanisms like his 'system call trap handler' to make up for this lack, and use that to acquire the process attributes.

In contrast, the present invention completely integrates non-IP packet attributes with IP filtering, both in the filtering language (expression) and execution (within the TCP/IP protocol stack). This is not obvious when Fiveash is combined with Lucovsky because Fiveash uses

classic IP packet filtering using only IP packet attributes and Lucovsky uses a very different means of acquiring process attributes.

Applicants, therefore, urge that the rejections under 35 U.S.C. 103 be withdrawn, and that claims 18-21, 23, 38, 40, 46, and 51 be allowed.

SUMMARY AND CONCLUSION

Applicants urge that the above amendments be entered and the case passed to issue with claims 1-5, 8-14, 18-25, 29-30, 34-41, 43, and 45 -53.

The Application is believed to be in condition for allowance and such action by the Examiner is urged. Should differences remain, however, which do not place one/more of the remaining claims in condition for allowance, the Examiner is requested to phone the undersigned at the number provided below for the purpose of providing constructive assistance and suggestions in accordance with M.P.E.P. Sections 707.02(j) and 707.03 in order that allowable claims

can be presented, thereby placing the Application in condition for allowance without further proceedings being necessary.

Sincerely,

Edward B. Boden

By


Shelley M. Beckstrand
Shelley M. Beckstrand
Reg. No. 24,886

Date: 25 February 2006

Shelley M Beckstrand, P.C.
Patent Attorney
61 Glenmont Road
Woodlawn, VA 24381-1341

Phone: (276) 238-1972
Fax: (276) 238-1545

Correspondence Address:

IBM Corporation
Intellectual Property Law (Dept. 917, Bldg. 006-1)
3605 Highway 52 North
Rochester, MN 55901-7829